

Assistant Professor

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## Background

2017-present Assistant Professor, Shimane University 2016 – 2017 Senior Researcher, Hosei University

2016 Ph.D. in Engineering, Hosei University, Tokyo, Japan

## Research

I'm researching about data analysis and prediction using machine learning. Main topic is extract of latent features based on probabilistic model. Recently, I'm working on automating the casting process with Artificial Intelligence. We are conducting prediction of mechanical properties using deep learning and detection of slag in molten metal using convolution neural network.

## Key papers

- 1. Shirai, M., Liu, J., Miura, T., Chen, Y. C., Document stream classification based on transfer learning using latent topics, International Journal on Big Data Intelligence, Vol. 5, 1/2, pp.105-113, 2018
- 2. Shirai, M., Liu, J., Miura, T., Transfer Learning using Latent Domain for Document Stream Classification, The Second IEEE International Conference on Multimedia Big Data, 2016.84, 2016
- 3. Shirai, M., Miura, T., Online Classification with Partially Labelled Texts, International Conference on Web Intelligence, a special session on Complex Methods for Data and Web Mining, pp.421-428, 2014
- 4. Shirai, M., Yanagisawa, T., Miura, T., Context-based Query using Dependency Structures based on Latent Topic Model, Journal on Data Semantics Vol. 3, Issue 3 pp.157-168, 2014